CLAIMS

1. A nucleotide sequence according to SEQ ID NO: 1, 9 or 13 which is responsible for controlling side-shoot formation and/or petal formation and/or abscission zone formation, the fragment or derivative thereof or a nucleotide sequence which hybridizes with the nucleotide sequence according to SEQ ID NO: 1, 9 or 13 and which is responsible for controlling side-shoot formation and/or petal formation and/or abscission zone formation.

2. The nucleotide sequence according to claim 1, wherein said hybridizing nucleotide sequence hybridizes to the nucleotide sequence according to SEQ ID NO: 1, 9 or 13 under stringent conditions.

3. A nucleotide sequence as illustrated in SEQ ID NO: 1, 9 or 13.

4. A polypeptide having an amino acid sequence as illustrated in SEQ ID NO: 2, 10 or 14.

5. A vector comprising a nucleotide sequence according to any one of claims 1 to 3.

6. A transformed plant cell or transformed plant tissue, characterized in that an expressible DNA sequence responsible for controlling side-shoot formation and/or petal formation and/or abscission zone formation, or fragment or derivative thereof according to claim 1 or 2 is integrated in a stable manner into the genome of the plant cell or the plant tissue.

7. A plant cell or plant tissue according to claim 6, which may be regenerated into a seed producing plant.

8. A method for the preparation of plants having controlled side-shoot formation and/or petal formation and/or abscission zone formation comprising stable

integration of a least one expressible DNA sequence responsible for controlling side-shoot formation and/or petal formation and/or abscission zone formation or fragment or derivative thereof according to claim 1 or 2 into the genome of plant cells or plant tissues and regeneration of the resulting plant cells or plant tissues into plants.

9. The method according to claim 8, wherein for integration a DNA sequence or fragment or derivative thereof is used which suppresses side-shoot formation and/or petal formation and/or abscission zone formation.

10. The method according to claim 9, wherein the integrated DNA sequence or fragment or derivative thereof is expressed in an antisense orientation relative to the endogenous sequence responsible for controlling side-shoot formation and/or petal formation and/or abscission zone formation.

11. The method according to claim 9, wherein the integrated DNA sequence or fragment or derivative thereof is expressed in a sense orientation relative to the endogenous sequence responsible for controlling side-shoot formation and/or petal formation and/or abscission zone formation.

12. The method according to claim 9, wherein the side-shoot formation and/or petal formation and/or abscission zone formation is suppressed by a ribozyme comprising the integrated DNA sequence or fragment or derivative thereof.

13. The method according to claim 9, wherein the DNA sequence or fragment or derivative thereof is integrated into the genomic region of the homologous endogenous gene by homologous recombination.

14. The method according to claim 8, wherein for integration a DNA sequence or fragment or derivative thereof is used which enhances side-shoot formation and/or petal formation and/or abscission zone formation.

15. The method according to claim 14, wherein the integrated DNA sequence or fragment or derivative thereof is expressed in a sense orientation relative to the endogenous sequence responsible for controlling side-shoot formation and/or petal formation and/or abscission zone formation.

16. The method according to any one of claims 8 to 15, wherein as a plant a tomato plant, a rape plant, a potato plant or a snapdragon plant or the cell or tissue thereof is used.

17. A plant obtainable according to any one of claims 8 to 16.

18. Seed stocks obtained from plants according to claim 17.